DETERMINATION OF MUCK ELEVATION

LDH DESIGNATION: TR 426-67

Scope

This method of test is intended to determine muck elevation both before and after the mucking operation. It is primarily intended for use in inundated areas or in highly saturated materials where conventional means of cross-sectioning would be impractical and unreliable. This method of test is not intended for use in determining the extent of objectional material (muck) but is solely intended for use in determining the top elevation of the solid material. The extent of objectionable material will be determined by normal soil sampling and testing procedures. The device described below will be used in determining elevation before and/or after mucking for cross-sectional purposes only.

Apparatus

1. A six pound (± 0.1 lbs.) lead sounding weight having a height of 3 inches and a diameter of 4¼ inches cone-shaped with a 3/16 inch brass welding rod embedded therein and a 2¼" swivel attached to this rod.
2. A 1/16" stainless steel aircraft cable graduated in 0.5 ft. increments.
3. A short scale (Min. 0.5 foot) graduated in 0.1 ft. increments.

NOTE: See Figure 1 for details of weight.

Procedure

At each location, where a cross-section is desired, by use of the attached line, lower the lead sounding weight until it comes to rest. While the line is held vertical and taut, and using the short scale in conjunction with the calibrated line, the distance from the surface of the water to the point of rest of the weight is determined and recorded. The algebraic sum of the sounding distance* and the elevation of the water, will give that elevation to the top of the solid material. To secure accurate soundings, special care must be exercised to lower the weight gently to rest and to assure a vertical taut line.

Example Calculation:

(1) Negative water elevation
   a. Elevation of water level=-2.0 Ft.
   b. Sounding distance=-12.5 Ft.
   c. Elevation of top of solid material=-14.5 Ft.

(2) Positive water elevation
   a. Elevation of water level= + 28.0 Ft.
   b. Sounding distance=-10.6 Ft.
   c. Elevation of top of solid material= + 17.4 Ft.

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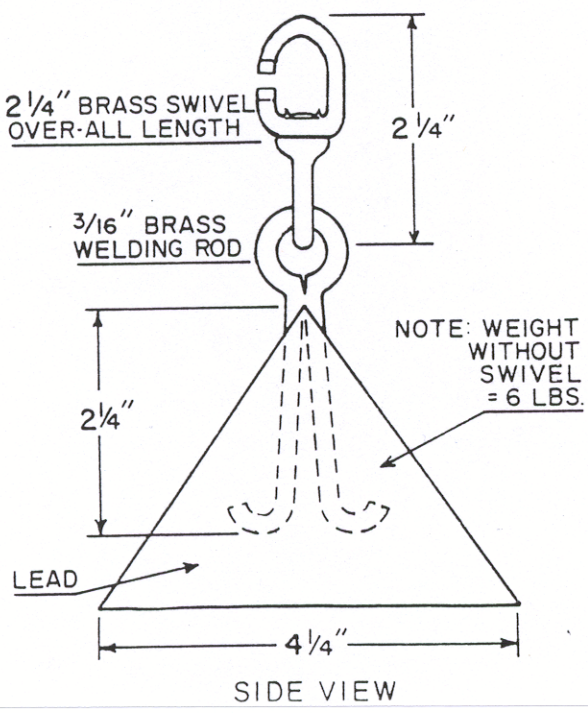
* The sounding distance is always a negative value.



SIDE VIEW